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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/791,374

03/01/2004

Per Flemming Hansen

606-64-PCT-CON

8964

7590

04/19/2005

Howard J. Klein
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EXAMINER

MEHRA, INDER P

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,374	HANSEN ET AL.	
	Examiner	Art Unit	
	Inder P Mehra	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/1/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is in response to office action dated: 3/1/04.

Priority Document

2. Acknowledgment is made of applicant's claim for foreign priority based on an applications filed in Denmark on 2/3/01, 9/12/01 and 10/16/01 respectively. It is noted, however, that applicant has not filed a certified copy of the application nos. DENMARK DK PA 2001 01293, DENMARK DK PA 2001 01327, and DENMARK DK PA 2001 01522, as required by 35 U.S.C. 119(b).
3. Copy of continuation document no. PCT/DK02/00573 dated 9/3/02 should also be provided.

Specification

4. The disclosure is objected to because of the following informalities:
5. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following items are not understood:
 - Acronym "DWDM" has been introduced first time at page 3 line 30 and "OSPF" has been used at page 5 line 9. It is not clear as to their expanded names, and how these fit into invention.
 - "the external circle" and "inner circle" are used at page 4 lines 2-3. These do not relate to figure 3. No figure is labeled by component's name. Whole of specification

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does not read with respect to figures, for example, multiplexers 33 and Ethernet connection 36 at page 4 lines 8 and 9 are not traceable in figure 3. Similarly, Add/Drop multiplexer 32 and IP router 30 are not shown in fig. 8. It is very difficult to comprehend the configuration of apparatus/system of network of the invention.

These are just examples illustrated to prove that whole of disclosure is not comprehensible. To facilitate proper search, it is important to have clear and precise description of specification in support of claims.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

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(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
DEVELOPMENT.

(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A

COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing"

is required on paper if the application discloses a nucleotide or amino acid sequence as defined in

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37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. *The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words* may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were

permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather

than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Appropriate correction is required.

Drawings

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter in claims 1-4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

7. Claims objected to because of the following informalities:

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- Claim 1 recites “a SDH/Sonet sub-network” in line 3. Change it to “the SDH/Sonet sub-network”, because it is preceded by the same limitation in line 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Following claims are not disclosed in the specifications and drawings:

Telecommunications network comprising SDH/sonet sub-network constituting a transport network and with SDH/sonet Add/Drop multiplexers, DVDM multiplexers etc., where the GMPLS function for a SDH/sonet sub-network is collected in one single GMPLS software reserver.

Network according to claim 1, characterised in that, in the external limit of the SDH/sonet sub-network, units are provided for the collecting of GMPLS resewation packages and that these units communicate with the network outside the SDH/sonet sub- network on behalf of this SDH/sonet sub-network.

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Network according to claim 2, characterised in that the mentioned units are constituted by MPLS/GMPLS enabler cards.

Network according to claim 1, characterised in that the GMPLS software server in relation to the external network makes GMPLS tunnels into the SDH/sonet sub- network available for this external IP/MPLS network.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "etc." in line 2. This is indefinite in scope and merit.

Claim 1 recites the limitation "the GMPLS function" in line 3. There no antecedent basis for this limitation in the claim.

Claim 2 recites the following limitations:

- "the external limit" in line 2.
- "the collecting" in line 2.

There is no antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the mentioned units" in line 1. There is no antecedent basis for this limitation in the claim.

Claim 4 recites the following limitations:

"the GMLS software server" in line 1.

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"the external network" in line 2.

"the external IP/MPLS network" in line 3.

There is no antecedent basis for these limitation in the claim.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Mannam** (US Patent Application No. 2004/0105459) in view of **Stephens et al** (US Patent No.6,388,782), hereinafter, Stephens..

For claim 1, Mannam discloses "Telecommunications network", refer to paragraph 0003 comprising SDH/sonet sub-network, refer to paragraphs 0004-0005, constituting a transport network, refer to paragraphs 0004, refer to paragraphs 0004-0005 and with SDH/sonet Add/Drop multiplexers, DVDM multiplexers etc., where the GMPLS function for a SDH/sonet sub-network is collected in one single GMPLS software reserver, refer to paragraph 0049 (FIG. 12 shows the control software architecture of the invention---- the MPLS/GMPLS standard label distribution protocol units. The SONET Path Manager builds the SONET path database using the information in the SONET Topology Database. The SONET Topology database is built from the extended Link State Advertisements received from the other GFP MPLS devices and other transport nodes).

Mannam does not disclose the following limitations, which are disclosed by Stephens, as follows:

- “SDH/sonet Add/Drop multiplexers, DVDM multiplexers”, (The present invention relates to system architecture and usage of a dense wavelength division multiplex (DWDM) crossconnect system and optical add/drop multiplexer which preferably, though not necessarily, uses a multi-wavelength mode locked (MWML) external cavity laser as a fundamental sub-circuit for optically cross-connecting several multi-wavelength data channels onto similar data channels having an interchanged set of optical wavelengths, refer to 2 line 65 through col. 3 line 27).
- the mentioned units are constituted by MPLS/GMPLS enabler cards, refer to paragraph 0055.

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of SDH/Sonet Add/Drop multiplexers, and DVDM multiplexers. This capability can be implemented by connecting these devices SDH/Sonet network. The motivation for using SDH/Sonet Add/Drop multiplexers, and DVDM multiplexers being that it develops add/drop multiplexers and other components of a DWDM optical transmission system using such MWML laser light sources so as to provide an improved MWML-DWDM optical transmission system. The present invention has been designed to meet these needs in the art.

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13. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mannam**, and **Stephens et al**, hereinafter, Stephens in view of **Maccioco et al** (US Patent Application No. 2005/0030951), hereinafter, '951.

For claims 2-3, Mannam and Stephens disclose all the limitations of subject matter with the exception of the following limitation which is disclosed by '951, as follows:

- in the external limit of the SDH/sonet sub-network, units are provided for the collecting of GMPLS reservation packages and that these units communicate with the network outside the SDH/sonet sub-network on behalf of this SDH/sonet sub-network (GMPLS signaling extensions are disclosed for enabling reservation scheduling using the RSVP-TE (ReSerVation Protocol-Traffic Engineering) protocol. Link management component 408 can be implemented based on the well-known link management protocol (LMP) (that currently supports only SONET/SDH networks, refer to paragraph 0055)

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "in the external limit of the SDH/sonet sub-network, units are provided for the collecting of GMPLS reservation packages and that these units communicate with the network outside the SDH/sonet sub-network on behalf of this SDH/sonet sub-network". This capability can be implemented by connecting these device to SDH/Sonet network. The motivation for using SDH/Sonet Add/Drop multiplexers, and DVDM multiplexers being that it develops add/drop multiplexers and other components of a DWDM optical transmission system using such MWML laser light sources so as to provide an improved MWML-DWDM optical transmission system. The present invention has been designed to meet these needs in the

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art.

14. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Mannam**, and **Stephens et al**, hereinafter, Stephens in view of **DeMartino et al** (US Patent Application No. 2002/0141400), hereinafter, '400.

For claim 4, Mannam and Stephens disclose all the limitations of subject matter with the exception of the following limitation which is disclosed by '400, as follows:

- GMPLS software server in relation to the external network makes GMPLS tunnels into the SDH/sonet sub- network available for this external IP/MPLS network, refer to paragraphs 0064 and 0066.

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "GMPLS software server in relation to the external network makes GMPLS tunnels into the SDH/sonet sub- network available for this external IP/MPLS network. This capability can be implemented by connecting these device to SDH/Sonet network. The motivation for using SDH/Sonet Add/Drop multiplexers, and GMPLS being that it provides control for data flow by using signaling channels.

Prior Art of Record

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Karol et al (US Patent No. 6,628,617) disclosed traffic on a connectionless network, such as IP packets routed onto a connection oriented network.

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Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Inder Pal Mehra
Inder P Mehra 4/16/05
Examiner
Art Unit 2666

IPM
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